2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Grayson

STREAM NAME: Little River

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAS-N04R_LVR01A98 **TMDL MAP ID:** VAS-N04R-00

SEGMENT SIZE: 5.25 - Miles

INITIAL LISTING: 1998 **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: North Carolina State line

RIVER MILE: 5.25

LATITUDE: 36.56444 **LONGTITUDE:** -81.01222

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence

RIVER MILE: 0.00

LATITUDE: 36.60500 **LONGTITUDE:** -81.06278

Little River flows parallel to Route 632 and is located east of Peach Bottom and southwest of Baywood in Grayson County. The segment begins at the North Carolina state line and ends at its confluence with New River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
Nickel	Unknown

SUMMARY:

Sediment samples at stream mile 9-LVR001.34 exceed effect range-median (ER-M) values in 1983, 1994 and 1995 for nickel and August 1995 for antimony.

The source is unknown.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Grayson

STREAM NAME: Peach Bottom Creek

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAS-N04R_PCB01A98 **TMDL MAP ID:** VAS-N04R-01

SEGMENT SIZE: 2.74 - Miles

INITIAL LISTING: 1998 **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: Independence STP discharge

RIVER MILE: 2.74

LATITUDE: 36.60111 **LONGTITUDE:** -81.11139

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence

RIVER MILE: 0.00

LATITUDE: 36.58278 **LONGTITUDE:** -81.08722

This segment of Peach Bottom Creek begins at the Independence STP discharge above Route 697 and ends at its confluence with New River in Grayson County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
General Standard (Benthic)	Unknown

SUMMARY:

Four out of 20 samples of phosphorus were above the phosphorus guideline value.

The source is unknown. This sample site is just downstream of the Independence wastewater treatment plant discharge which is located a 9-PBC002.79. Agriculture is another land use in the watershed and its contribution to criteria exceedences should also be considered in seeking this source.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Grayson, Carroll, Galax, City of

STREAM NAME: Chestnut Creek

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAS-N06R_CST04A98, **TMDL MAP ID:** VAS-N06R-00

SEGMENT SIZE: 6.09 - Miles

INITIAL LISTING: 2002 **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: Coal Creek confluence

RIVER MILE: 20.09

LATITUDE: 36.63167 **LONGTITUDE:** -80.90000

DOWNSTREAM LIMIT:

DESCRIPTION: Galax Intake

RIVER MILE: 14.00

LATITUDE: 36.66278 **LONGTITUDE:** -80.92000

This segment of Chestnut Creek flows between the Galax raw water intake, above the town of Galax, to Coal Creek which is in the headwaters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
Nickel	Unknown

SUMMARY:

The sediment sample at station 9-CST016.82 and at 9-CST016.82 exceeded Nickel which threatens aquatic life uses. The benthic station at 9-CST010.18 has data indicating full support in 1996. Another benthic station at 9-CST013.29 was also rated not impaired in 1997. Therefore it appears that the segment does not belong on the TMDL list.

Sources of metal exceedences are unknown.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Grayson, Carroll, Galax, City of

STREAM NAME: Chestnut Creek

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAS-N06R_CST01A94, **TMDL MAP ID:** VAS-N06R-01

SEGMENT SIZE: 14 - Miles

INITIAL LISTING: 1994 **TMDL Schedule:** 2004 - 2006

UPSTREAM LIMIT:

DESCRIPTION: Galax Intake

RIVER MILE: 14.00

LATITUDE: 36.66278 **LONGTITUDE:** -80.92000

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence

RIVER MILE: 0.00

LATITUDE: 36.75944 **LONGTITUDE:** -80.95556

The segment includes the mainstem of Chestnut Creek from the Galax raw water intake to the New River confluence. The segment is one mile shorter due to NHD dataset use.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
General Standard (Benthic)	Resource Extraction
General Standard (Sediment-Zn, Ni)	Unknown

SUMMARY:

Biological monitoring stations at 9-CST001.31 and 9-CST002.64 are moderately impaired. An ambient station at 9-CST002.64 fully supports the swimmable use with 2 violations of 20 fecal coliform samples. This station indicates that zinc, and nickel have exceeded the effect range-median (ER-M) values. These exceedences may threaten aquatic life in this segment. Biological stations at 9-CST010.18 and 9-CST013.9 indicate fully supporting aquatic life uses for 2002.

The source of benthic impairment is probably due to mining activities which historically occurred in the area. Allied-Signal Gossen Mine is the former site of sulfur mining operations in an iron-pyrrhotite seam that closed in 1962. This facility has a VPDES permit to treat acid mine drainage. Sources for sediment metal exceedences are unknown.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Carroll

STREAM NAME: Crooked Creek

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAS-N07R_CRK01A98 **TMDL MAP ID:** VAS-N07R-00

SEGMENT SIZE: 10.04 - Miles

INITIAL LISTING: 1998 **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: Cranberry Creek confluence

RIVER MILE: 12.39

LATITUDE: 36.72889 **LONGTITUDE:** -80.86333

DOWNSTREAM LIMIT:

DESCRIPTION: Crooked Creek backwaters to Byllsby Dam

RIVER MILE: 2.35

LATITUDE: 36.77944 **LONGTITUDE:** -80.92139

This segment includes the mainstem of Crooked Creek from its confluence with Cranberry Creek to the backwaters of Byllsby Dam. Crooked Creek confluence with New River about 0.75 miles upstream of Byllsby Dam. This segment parallels Routes 635 and 620. The community of Hebron is southwest of the segment and Galax lies to the south of the stream.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	**IMPAIRMENT SOURCE**
General Standard (Sediment-PCB)	Unknown

SUMMARY:

An ambient water quality monitoring station, 9-CRK003.27, had an exceedence of PCB's in the sediments.

The source for the PCB's is unknown. Although there are no active iron mining operations, resource extraction was historically performed throughout this region.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Carroll, Wythe

STREAM NAME: New River

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAS-N08R_NEW01B98 **TMDL MAP ID:** VAS-N08R-00

SEGMENT SIZE: 1.45 - Miles

INITIAL LISTING: 2002 **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: Austinville Intake

RIVER MILE: 124.05

LATITUDE: 36.80611 **LONGTITUDE:** -80.93333

DOWNSTREAM LIMIT:

DESCRIPTION: Buddle Branch confluence

RIVER MILE: 122.6

LATITUDE: 36.86333 **LONGTITUDE:** -80.90722

The segment extends from Austinville Intake to the Buddle Branch confluence. Buddle Branch flows north around the community of Austinville to its confluence with New River. The community of Ivanhoe is also within this drainage, between Route 94 and Interstate 77 in Grayson, Carroll and Wythe Counties.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
Lead, Zinc	Unknown
	Resource Extraction

SUMMARY:

An special sediment station, 9-NEW117.42, had both lead and zinc exceedences of the ER-M guideline values.

The source of the sediment metal exceedances is probably due to lead and zinc resource extraction near Austinville and a tailings pile. Continued sediment monitoring is necessary to characterize the source.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Wythe

STREAM NAME: Reed Creek

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAS-N10R_RDC02B02 **TMDL MAP ID:** VAS-N10R-00

SEGMENT SIZE: 15.8 - Miles

INITIAL LISTING: 2002 **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: Beaverdam Creek confluence

RIVER MILE: 15.80

LATITUDE: 36.96889 **LONGTITUDE:** -80.94472

DOWNSTREAM LIMIT:

DESCRIPTION: New River confluence

RIVER MILE: 0.00

LATITUDE: 36.92250 **LONGTITUDE:** -80.82694

The segment begins at the confluence with Beaverdam Creek and ends at the confluence with New River in Wythe County below Wytheville.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
Fish Tissue - PCBs	Unknown

SUMMARY:

An ambient station located at 9-RDC009.00 had PCB in the fish tissue.

The source is unknown

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Carroll, Wythe, Pulaski

STREAM NAME: Little Reed Island Creek

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAS-N15R_LRI01A98 **TMDL MAP ID:** VAS-N15R-00

SEGMENT SIZE: 10.63 - Miles

INITIAL LISTING: 1998 **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: Rock Creek confluence

RIVER MILE: 10.63

LATITUDE: 36.86361 **LONGTITUDE:** -80.77667

DOWNSTREAM LIMIT:

DESCRIPTION: Big Reed Island Creek confluence

RIVER MILE: 0.00

LATITUDE: 36.93194 **LONGTITUDE:** -80.74917

This Little Reed Island Creek segment extends from the Rock Creek confluence, in High Rocks Mill near Route 100, to the Big Reed Island Creek confluence at Routes 693 and 697. This is south of Reed Junction and southwest of Allisonia in Pulaski County.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
Zinc	Unknown

SUMMARY:

Sediment analysis from an ambient water quality monitoring station at 9-LRI001.62 has effect range - median (ER-M) value exceedences for zinc.

There are resource extraction land uses in this segment however the source for sediment exceedences is not known.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Pulaski

STREAM NAME: Claytor Lake - New River

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAW-N16L_NEW01A02 **TMDL MAP ID:** VAW-N16L-01N

SEGMENT SIZE: 3975.52 - Acres

INITIAL LISTING: 2002 **TMDL Schedule:** 2010 - 2014

UPSTREAM LIMIT:

DESCRIPTION: Claytor Lake backwaters.

RIVER MILE: 104.56

LATITUDE: 36.93861 **LONGTITUDE:** -80.73957

DOWNSTREAM LIMIT:

DESCRIPTION: Claytor Dam.

RIVER MILE: 87.14

LATITUDE: 37.07528 **LONGTITUDE:** -80.58515

The segment begins at the upstream end of the WQS public water supply PWS designation for the Pulaski County PSA and extends downstream to Claytor Dam. The segment spans the Hiwassee, Dublin and Radford South Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened, Fish Consumption Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
Total Phosphorus / Metals in sediment	Natural/Stratification
	NPS / Unknown
Fish Tissue - PCBs - 3975.52 Acres	Unknown

SUMMARY:

Both DEQ and Citizen monitoring stations and locations are listed below. Stations ending in "TL" are surface collections and "BL" are same site collections at depth. Stations with neither suffix are surface collections.

DEQ Stations
9-NEW087.14-TL - Under Power Lines above Dam
9-NEW087.14-BL
9-NEW088.86 - Claytor Lake at Dam (2000 fish tissue & sediment)
9-NEW089.34-TL - Line Between Beach and Inlet
9-NEW089.34-BL
9-NEW092.66-TL - Dublin Water Works
9-NEW092.66-BL
9-NEW098.32-TL - Route 672 Bridge
9-NEW098.32-BL
9-NEW100.54 - Route 672 Bridge (collected from bridge)
9-NEW105.05-TL - New R. - Claytor Lake (2000 fish tissue)
9-NEW105.05-BL - (Two sediment collections only)

Citizen Stations
9NEW-CL1-FC - Above dam
9NEW-CL2-FC - Dublin Hollow
9NEW-CL3-FC - Near Mallard Point
9NEW-CL4-FC - New R. - Claytor Lake
9NEW-CL5-FC - New R. - Claytor Lake
9NEW-CL8-FC - Downstream of Clapboard Hollow (Izaak Walton)

9NEW-CL9-FC - New R. - Claytor Lake
9NEW-CL10-FC - New R. - Claytor Lake
9NEW-CL11-FC - New River Trail Railroad trestle
9NEW-CL12-FC - Mid channel from Allisonia's boat ramp

Aquatic Life Use
Top Layer: Station 9-NEW087.14-TL with a maximum alkaline exceedance of 9.84 records six exceedances of the pH 6.0-9.0 Standard Unit (SU) range criterion from 18 measurements. Station 9-NEW089.34-TL reports 3 of 18 measurements exceeding the alkaline criterion with a maximum value of 9.30 SU. The aquatic life use is impaired based on these results. The naturally occuring impairment is believed to extend from the former Klopman (Burlington) water intake (37°04'00.71" / 80°39'13.20") downstream to the dam (37°04'31.32" / 80°35'04.86") a total of 1809.38 acres or a distance of 5.64 miles.

Total phosphorus and chlorophyll a values are in excess of the 0.05 mg/l threshold used for both parameters in reservoirs. This causes the waters to be full supporting, but threatened. Listed below are total phosphorus (TP) # exceedances / total observations with (exceeding maxima mg/l) and chlorophyll a (CHLa) # exceedances / total observations with (exceeding maxima mg/l).

9-NEW087.14-TL	TP	0 / 20		CHLa	0 / 12	
9-NEW087.14-BL	TP	1 / 39	(0.06)			
9-NEW089.34-TL	TP	0 / 20		CHLa	0 / 12	
9-NEW089.34-BL	TP	0 / 39				
9-NEW092.66-TL	TP	0 / 20		CHLa	0 / 12	
9-NEW092.66-BL	TP	0 / 40				
9-NEW098.32-TL	TP	14 / 77	(0.20)	CHLa	0 / 10	
9-NEW098.32-BL	TP	5 / 18	(0.08)			
9NEW-CL1-FC	TP	0 / 17		CHLa	0 / 11	
9NEW-CL2-FC	TP	3 / 18	(0.07)	CHLa	0 / 11	
9NEW-CL3-FC	TP	2 / 18	(0.11)	CHLa	0 / 11	
9NEW-CL4-FC	TP	2 / 18	(0.07)	CHLa	0 / 11	
9NEW-CL5-FC	TP	4 / 18	(0.07)	CHLa	0 / 11	
9NEW-CL8-FC	TP	1 / 18	(0.06)	CHLa	2 / 11	(0.06)
9NEW-CL9-FC	TP	2 / 18	(0.055)	CHLa	1 / 11	(0.07)
9NEW-CL10-FC	TP	7 / 18	(0.01)	CHLa	0 / 11	
9NEW-CL11-FC	TP	5 / 18	(0.07)	CHLa	0 / 11	
9NEW-CL12-FC	TP	6 / 18	(0.19)	CHLa	0 / 11	

Bottom Layer: Dissolved oxygen in the bottom layer of the reservoir exceeds the 4.0 mg/l minimum criterion for Class IV waters. Exceedances occur in the late spring, summer and early fall. Dissolved oxygen depletion below the thermocline is a natural occurrence in reservoirs. Water Quality Standards do not specifically address the maintenance of dissolved oxygen levels (stratification) in a reservoir bottom layer. The minimum criterion, based on Class of water, applies to all waters in the Commonwealth. Depth profiles presented below record multiple dissolved oxygen measurements in excess of the criterion (# dissolved oxygen exceedances / total observations). Exceedances of the minimum criterion are believed to occur in the entirety of the segment even though dissolved oxygen measurements have not been conducted to determine the upper limit of the impairment. Therefore the segment is listed as a natural impairment (see Part 1C). The waters do not support the aquatic life use based on the existing Class IV dissolved oxygen minimum criterion and the natural depletion of oxygen at depth in reservoirs. The 2002 dissolved oxygen 303(d) Listing is new to this segment.

9-NEW087.14-BL - 22 / 33.
9-NEW089.34-BL - 19 / 34.
9-NEW092.66-BL - 20 / 34.
9-NEW098.32-BL - 5 / 16.

The aquatic life use is 'Threatened' based on sediment results at stations 9-NEW107.51 and 9-NEW105.05. Exceedances of the 1995 NOAA ER-M sediment metal screening value (SV) in parts per million (ppm) are found for lead (Pb, SV=218, 1 of 3 samples 280 max.) and zinc (Zn, SV=410, 3 of 3 samples 1157 max.) at station 9-NEW107.51. Station 9-NEW105.05 records exceedances of zinc from two 2000 collections at 481 and 505 ppm. The entire fully supporting, but threatened sediment segment extends from the backwaters of Claytor Lake downstream to approximately 0.5 miles downstream of the end of Rt. 651 (36°59'33.78" / 80°42'56.93"). A total of 834.1 acres or 7.46 miles. A separate Part 3 Threatened Fact Sheet describes the upper portion of the threatned segment.

Fish Consumption Use
2000 fish collections at 9-NEW105.05-TL and 9-NEW088.86 find polychlorinated biphenyls (PCBs) in excess of the human health-risk carcinogenic screening value (SV) of 54 parts per billion (ppb) in tissue from carp at each station. Fish tissue results are 134.1 ppb at 9-NEW105.05-TL and 223 at 9-NEW088.86. In light of these results and fish tissue results from Peak Creek additional tissue sampling is warranted. These waters are 'Threatened' for the fish consumption use as a result. A separate Part 3 Threatened Fact Sheet describes the upper portion of this 'Threatened' segment. Information on the fish tissue sampling program can be viewed at http://www.deq.state.va.us

Aquatic Life Use
The source of the pH alkaline exceedance is due to natural conditions created in reservoirs. Claytor Lake (New River portion) is designated by Virginia's Water Quality Standards as a Nutrient Enriched Water (9 VAC 25-260-350 A.4 and A.5.; NEW-4).

The source of the total phosphorus exceedances is believed to be from nonpoint sources. The exact sources of the runoff are unquantified.

Bottom dissolved oxygen depletion occurs naturally in reservoirs due to stratification.

The exact source(s) of the sediment metals exceedances are unknown.

Fish Consumption Use
The exact source(s) of PCB contamination is unknown.

The Virginia Department of Health (VDH) PCB action level is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment. Other information on VDH fish consumption advisories, prohibitions or bans can be viewed at http://www.vdh.state.va.us

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Pulaski

STREAM NAME: Claytor Lake

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAW-N16L_NEW06A02 **TMDL MAP ID:** VAW-NEW-4 Lakes

SEGMENT SIZE: 4462.89 - Acres

INITIAL LISTING: **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: Claytor Lake backwaters

RIVER MILE:

LATITUDE: **LONGTITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Claytor Lake

RIVER MILE:

LATITUDE: **LONGTITUDE:**

Water Quality Standards designate 'nutrient enriched waters' as: NEW-4 (Claytor Lake) and New-5 (Peak Creek and tributaries, Gatewood and Hogan Reservoirs).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	**IMPAIRMENT SOURCE**
WQS Designated nutrient enriched waters; NEW-4 and NEW-5	Water Quality Standards

SUMMARY:

Water Quality Standards contained in the Virginia Adminstrative Code (VAC) (9 VAC 25-260-00 et seq.) establish a designation of "nutrient enriched waters" based on an evaluation of indicators of nutrient enrichment (9 VAC 25-260-330). 9 VAC 25-260-350 provides a listing of designated "nutrient enriched waters". These waters are described below by the code number and description. Watershed Identification numbers addressed by this fact sheet and total acres covered by the respective code are supplied as reference. Monitored 'Threatened' acreages that exceed the total phosphorus and/or chlorophyll a thresholds of 0.05 mg/l follow:

9 VAC 25-260-350 A.4. - New River and its tributaries, except Peak Creek above Interstate 81, from Claytor Dam upstream to Big Reed Island Creek (Claytor Lake) - NEW-4.

Watershed:
VAW-N16L New River Total WQS Designated Acres: 4462.89. Monitored 'Threatened' Acres: 4139.65.

9 VAC 25-260-350 A.5. - Peak Creek from its headwaters to its mouth (confluence with Claytor Lake), including all tributaries to their headwaters - NEW-5.

Watersheds:
VAW-N16L Peak Creek Total WQS Designated Acres: 323.24. Monitored 'Threatened' 323.24.

Water Quality Standards (9 VAC 25-260-00 et seq.) designate 'nutrient enriched waters'. See Virginia Administrative Codes 9 VAC 25-260-330 Purpose and 9 VAC 25-260-350 Designation of nutrient enriched waters (A 1. - 21.).

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Pulaski

STREAM NAME: Claytor Lake - New River

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAW-N16L_NEW06A **TMDL MAP ID:**

SEGMENT SIZE: 164.13 - Acres

INITIAL LISTING: **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: Claytor Lake backwaters.

RIVER MILE: 107.04

LATITUDE: 36.93861 **LONGTITUDE:** -80.73957

DOWNSTREAM LIMIT:

DESCRIPTION: End of the PWS designation for the Pulaski County PSA.

RIVER MILE: 104.56

LATITUDE: 36.96722 **LONGTITUDE:** -80.72184

Claytor Lake from the backwaters of Claytor Lake at Allisonia downstream to the upstream end of the WQS public water supply PWS designation for the Pulaski County PSA.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened, Fish Consumption Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
Total Phosphorus / Metals in sediment	Unknown
Fish Tissue - PCBs	

SUMMARY:

This fact sheet describes the upper portions of the aquatic life and fish consumption use 'Threatened' segment.

Aquatic Life Use
Total phosphorus excursions of the 0.05 mg/l threshold are found in citizen data at station 9NEW-CL12-FC (Mid channel from Allisonia's boat ramp) with six exceeding from 18 total samples. No chlorophyll a observations exceed from 11 samples. The waters are fully supporting but threatened based on these results.

The aquatic life use is 'Threatened' based on sediment results at stations 9-NEW107.51 and 9-NEW105.05. Exceedances of the 1995 NOAA ER-M sediment metal screening value (SV) in parts per million (ppm) are found for lead (Pb, SV=218, 1 of 3 samples 280 max.) and zinc (Zn, SV=410, 3 of 3 samples 1157 max.) at station 9-NEW107.51. Station 9-NEW105.05 records exceedances of zinc from two 2000 collections at 481 and 505 ppm. The entire fully supporting, but threatened sediment segment extends from the backwaters of Claytor Lake downstream to approximately 0.5 miles downstream of the end of Rt. 651 (36°59'33.78" / 80°42'56.93"). A total of 834.1 acres or 7.46 miles.

Fish Consumption Use
2000 fish collections at 9-NEW105.05-TL find polychlorinated biphenyls (PCBs) in excess of the human health-risk carcinogenic screening value (SV) of 54 parts per billion (ppb) in tissue from one carp. Fish tissue results are 134.1 ppb at 9-NEW105.05-TL. These waters are 'Threatened' for the fish consumption use as a result. The entire fully supporting, but threatened fish consumption use extends to Claytor Dam. Information on the fish tissue sampling program can be viewed at http://www.deq.state.va.us.

Aquatic Life Use
The exact source(s) of the sediment metals is unknown.

Fish Consumption Use
The exact source(s) of the PCB contamination in fish tissue are unknown.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Pulaski

STREAM NAME: Claytor Lake - Peak Creek

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAW-N16L_PKC01A02 **TMDL MAP ID:** VAW-N16L-02

SEGMENT SIZE: 323.24 - Acres

INITIAL LISTING: 2002 **TMDL Schedule:** 2010 - 2014

UPSTREAM LIMIT:

DESCRIPTION: Backwaters of Claytor Lake Peak Cr. arm.

RIVER MILE: 5.42

LATITUDE: 37.04639 **LONGTITUDE:** -80.72782

DOWNSTREAM LIMIT:

DESCRIPTION: Peak Cr. mouth on New R.

RIVER MILE: 0.00

LATITUDE: 37.05056 **LONGTITUDE:** -80.67164

The segment begins at Peak Creek's backwaters of Claytor Lake and ends at Peak Creek's mouth on the New River in Claytor Lake. The entire segment is on the Dublin Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
Fish Tissue - PCBs	Unknown
Dissolved oxygen	Natural / Stratification
Total Phosphorus & Chlrophyll a / Metals & Organics in sediment	NPS / Unknown

SUMMARY:

Fish Consumption Use
2000 collections at 9-PKC007.82 (Rt. 99 Bridge) and 9-PKC004.65 (Rt. 100 Bridge) each reveal polychlorinated biphenyls (PCBs) in excess of the human health-risk carcinogenic screening value (SV) of 54 parts per billion (ppb) in tissue from two species. 9-PKC007.82 (VAW-N17R) finds a Smallmouth bass with 71.4 ppb and 9-PKC004.65 a carp with 150 ppb. Due to the proximity of the stations and two species found with PCBs the segment only partially supports the fish consumption use. The fish consumption impairment extends upstream to ~0.20 miles downstream of the Washington Avenue bridge in Pulaski. There is no Virginia Department of Health (VDH) Advisory as tissue concentrations are below the VDH action level of 600 ppb. Information on the fish tissue sampling program can be viewed at http://www.deq.state.va.us/water/

Aquatic Life Use
Top Layer: Citizen stations 9PKC-CL7-FC and 9PKC-CL6-FC find total phosphorus (TP) and chlorophyll a (CHLa) in excess of the 0.05 mg/l threshold values for reservoirs. 9PKC-CL7-FC (Conrad Brother's Marina) records 11 of 18 TP samples and two of 11 CHLa samples in excess of the threshold. 9PKC-CL6-FC reports three of 18 TP and three of 11 CHLa in excess of the threshold. These results cause the waters to be fully supporting, but threatened. Maxima values (mg/l) are as follows:

9PKC-CL7-FC TP 0.07 CHLa 0.06
9PKC-CL6-FC TP 0.10, CHLa 0.06

Bottom Layer: Dissolved oxygen in the bottom layer of the reservoir exceeds the 4.0 mg/l minimum criterion for Class IV waters. Exceedances occur in the late spring, summer and early fall. Dissolved oxygen depletion below the thermocline is a natural occurrence in reservoirs. Water Quality Standards do not specifically address the maintenance of dissolved oxygen levels (stratification) in a reservoir bottom layer. The minimum criterion, based on Class of water, applies to all waters in the Commonwealth. Depth profiles at 9-PKC000.00 report 19 of 32 dissolved oxygen measurements in excess of the criterion. Exceedances of the minimum criterion are believed to occur in the entirety of the segment even though dissolved oxygen

measurements have not been conducted throughout its length. Therefore the segment is listed as a natural impairment (see Part 1C). The waters do not support the aquatic life use based on the existing Class IV dissolved oxygen minimum criterion and the natural depletion of oxygen at depth in reservoirs. The 2002 dissolved oxygen 303(d) Listing is new to this segment.

The waters are fully supporting, but threatened based on the exceedance of the 1995 NOAA sediment effect-range median (ER-M) screening values (SV) for copper (Cu), zinc(Zn) and chlorodane. Station 9-PKC004.65B records a 2000 sediment chlorodane value of 10.0 parts per billion (ppb) exceeding the SV of 6 ppb. Copper exceeds the SV of 270 parts per million (ppm) at 327, and zinc exceeds the SV of 410 ppm at 894 at 9-PKC004.65B. Station 9-PKC004.16 reports exceedances of copper (SV= 270, 4 of 4 samples, max. 610), lead (SV= 218, 1 of 4 samples, max. 230) and zinc (SV= 410, 4 of 4 samples, max 1470); Station 9-PKC000.00-BL (Peak Creek mouth) finds zinc exceedances (SV= 410, 3 of 4 samples, max. 520) all from 1996 through 1999 collections.

Fish Consumption Use
The exact source(s) of the PCB contamination is unknown.

The Virginia Department of Health (VDH) PCB action level is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment. Other information on VDH fish consumption advisories, prohibitions or bans can be viewed at http://www.vdh.state.va.us

Aquatic Life Use
Bottom dissolved oxygen depletion occurs naturally in reservoirs due to stratification.

Total phosphorus (chlorophyll a) sources are believed to be a mixture of nonpoint source contributions. Claytor Lake (Peak Creek portion) is designated by Virginia's Water Quality Standards as a Nutrient Enriched Water (9 VAC 25-260-350 A.4 and A.5.; NEW-5).

The exact source of the sediment nickel contamination is unknown.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Pulaski

STREAM NAME: New River

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAW-N16R_NEW01A00 **TMDL MAP ID:** VAW-N16R-01

SEGMENT SIZE: 0.81 - Miles

INITIAL LISTING: 1998 **TMDL Schedule:** 2004 - 2010

UPSTREAM LIMIT:

DESCRIPTION: Big Reed Island Cr. Confluence

RIVER MILE: 107.75

LATITUDE: 36.93472 **LONGTITUDE:** -80.74990

DOWNSTREAM LIMIT:

DESCRIPTION: Claytor Lake backwaters

RIVER MILE: 106.94

LATITUDE: 36.93889 **LONGTITUDE:** -80.73961

This segment of the New River is between the Big Reed Island Creek confluence, near Route 100, and the backwaters of Claytor Lake near the Wythe/Pulaski county line.

Note: This segment was erroneously listed as part of NO8R in 1998. Segment mileage has been adjusted to reflect station location and use of the National Hydrography Dataset (NHD).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	**IMPAIRMENT SOURCE**
Metals in sediment	Unknown

SUMMARY:

A biological monitoring station, 9-NEW107.65 (Allisonia gage), was rated as moderately impaired twice in 1994 and not impaired in 1997. Although the 1994 Rapid Biological Protocol II (RBP II) surveys are outside the assessment data window the waters remain partially supporting the aquatic life use as insufficient data (one RBP II survey) do not allow a complete delisting. Additional RPB II survey data will allow for a more accurate determination of the aquatic life use support. The waters are thus 'impaired' for the aquatic life use based on the 1998 303(d) Listing and insufficient data to delist the segment. The segment is also adjusted to reflect the watershed boundary with N08R.

Station 9-NEW107.51, has effect range-median (ER-M) sediment screening value (SV) exceedances for lead (1996) and zinc (1996, 1997 & 1999). sediment lead (Pb, SV= 218 ppm, 1 of 3 samples max. 280) and zinc (Zn, SV= 410 ppm, 3 of 3 samples max. 1157) cause the aquatic life use to be full supporting, but threatened. The maximum lead and zinc values are found in the 1996 data.

This section of the New River was contained in the Plantiffs Attachment B List for fecal coliform. The 2002 Assessment finds the swimming use is fully supported. Station 107.51 found only three of 52 samples in excess of the fecal coliform 1000 n/100 ml instantaneous criterion. Exceeding values are 1100 (1996), 3600 (1997) and 2100 (1998). Excluding maxima and including values reported as less than 100 (remark code "U") the average bacterial count is 91 n/100 ml. The instantaneous average including all reported counts is 216 n/100 ml.

The exact source(s) of the General Standard (benthic) partial support and sediment exceedances are unknown. Resource extraction is a historic activity upstream of the watershed and may be the source of metal values in the sediments. Quarry and gravel industries and old iron furnaces are located in the region.

2002 Assessment fecal coliform bacteria do not exceed and are therefore not listed.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Pulaski

STREAM NAME: New River and Peak Creek

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAW-N16R_NEW01A00 **TMDL MAP ID:** VAW-NEW-4,5 Rivers

SEGMENT SIZE: 192.67 - Miles

INITIAL LISTING: **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: New River, Peak Creek and their tributaries.

RIVER MILE:

LATITUDE: **LONGTITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Claytor Lake backwaters

RIVER MILE:

LATITUDE: **LONGTITUDE:**

Water Quality Standards designate 'nutrient enriched waters' as: NEW-1 (Smith Mountain Lake), NEW-4 (Claytor Lake) and New-5 (Peak Creek, Gatewood and Hogan Reservoirs).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	**IMPAIRMENT SOURCE**
WQS Designated nutrient enriched waters; NEW-4 and NEW-5	Water Quality Standards

SUMMARY:

Water Quality Standards contained in the Virginia Administrative Code (VAC) (9 VAC 25-260-00 et seq.) establish a designation of "nutrient enriched waters" based on an evaluation of indicators of nutrient enrichment (9 VAC 25-260-330). 9 VAC 25-260-350 provides a listing of designated "nutrient enriched waters". These waters are described below by the code number and description. Watershed Identification numbers addressed by this fact sheet and total miles covered by the respective code are supplied as reference. 'Threatened' mileages are as follows:

9 VAC 25-260-350 A.4. - New River and its tributaries, except Peak Creek above Interstate 81, from Claytor Dam upstream to Big Reed Island Creek (Claytor Lake).
Watersheds:
VAW-N16R - Total Miles: 70.08. 'Threatened' Miles: 69.27.

9 VAC 25-260-350 A.5. - Peak Creek from its headwaters to its mouth (confluence with Claytor Lake), including all tributaries to their headwaters.
Watersheds:
VAW-N17R - Total Miles: 130.84. 'Threatened' Miles: 123.40.

Water Quality Standards (9 VAC 25-260-00 et seq.) designate 'nutrient enriched waters'. See Virginia Administrative Codes 9 VAC 25-260-330 Purpose and 9 VAC 25-260-350 Designation of nutrient enriched waters (A 1. - 21.).

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Pulaski

STREAM NAME: Gatewood and Hogan Reservoirs

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAW-N17L_PKC01A02 **TMDL MAP ID:** VAW-NEW-5 Lakes

SEGMENT SIZE: 224.94 - Acres

INITIAL LISTING: **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: Gatewood and Hogan Reservoirs

RIVER MILE:

LATITUDE: **LONGTITUDE:**

DOWNSTREAM LIMIT:

DESCRIPTION: Gatewood and Hogan Reservoirs

RIVER MILE:

LATITUDE: **LONGTITUDE:**

Water Quality Standards designate 'nutrient enriched waters' as: NEW-4 (Claytor Lake) and New-5 (Peak Creek and tributaries, Gatewood and Hogan Reservoirs).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	**IMPAIRMENT SOURCE**
WQS Designated nutrient enriched waters; NEW-4 and NEW-5	Water Quality Standards

SUMMARY:

Water Quality Standards contained in the Virginia Adminstrative Code (VAC) (9 VAC 25-260-00 et seq.) establish a designation of "nutrient enriched waters" based on an evaluation of indicators of nutrient enrichment (9 VAC 25-260-330). 9 VAC 25-260-350 provides a listing of designated "nutrient enriched waters". These waters are described below by the code number and description. Watershed Identification numbers addressed by this fact sheet and total acres covered by the respective code are supplied as reference. Monitored 'Threatened' acreages that exceed the total phosphorus and/or chlorophyll a thresholds of 0.05 mg/l follow:

9 VAC 25-260-350 A.5. - Peak Creek from its headwaters to its mouth (confluence with Claytor Lake), including all tributaries to their headwaters - NEW-5.

Watersheds:
VAW-N17L - Total WQS Designated Acres: 182.05 Gatewood Reservoir.
VAW-N17L - Total WQS Designated Acres: 42.89 Hogan Reservoir.
There are no total phosphorus or chlorophyll a data within assessment window for Gatewood and Hogan Reservoirs.

Water Quality Standards (9 VAC 25-260-00 et seq.) designate 'nutrient enriched waters'. See Virginia Administrative Codes 9 VAC 25-260-330 Purpose and 9 VAC 25-260-350 Designation of nutrient enriched waters (A 1. - 21.).

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Pulaski

STREAM NAME: Peak Creek

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAW-N17R_PKC02A00 **TMDL MAP ID:** VAW-N17R-01

SEGMENT SIZE: 4.46 - Miles

INITIAL LISTING: 1996 **TMDL Schedule:** 2001 - 2010

UPSTREAM LIMIT:

DESCRIPTION: ~0.2 mi. downstream of the Washington St Bridge.

RIVER MILE: 9.88

LATITUDE: 37.04694 **LONGTITUDE:** -80.77727

DOWNSTREAM LIMIT:

DESCRIPTION: Backwaters of Claytor Lake.

RIVER MILE: 5.42

LATITUDE: 37.04639 **LONGTITUDE:** -80.72782

The segment extends upstream to approximately 0.2 miles downstream of the Washington Avenue Bridge on the Pulaski Quad. The segment ends at its inundation in Claytor Lake on the Dublin Quad.

Note: Slight changes in 1998 segment mileage are due to the use of the National Hydrography Dataset (NHD).

CLEAN WATER ACT GOAL AND USE SUPPORT:

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
Fish Tissue - PCBs	Unknown
Fecal Coliform	NPS - Urban
General Standard (Benthic) / Metals in sediment / Organics in sediment	NPS - Urban / Legacy Industrial / Unknown

SUMMARY:

Fish Consumption Use
2000 fish collections at 9-PKC007.82 (Rt. 99 Bridge) and 9-PKC004.65 (Rt. 100 Bridge) each reveal polychlorinated biphenyls (PCBs) in excess of the human health-risk carcinogenic screening value (SV) of 54 parts per billion (ppb) in tissue from two species. 9-PKC007.82 finds a Smallmouth bass with 71.4 ppb and 9-PKC004.65 a carp with 150 ppb. The fish consumption impairment extends to the Peak Creek arm of Claytor Lake. Station 9-PKC004.65 is in Claytor Lake (VAW-N16L). Due to the proximity of the stations and two species found with PCBs the segment only partially supports the fish consumption use. There is no Virginia Department of Health (VDH) Advisory as tissue concentrations are below the VDH action level of 600 ppb. The fish consumption impairment is a 2002 addition to the 1998 303(d) Listing. Information on the fish tissue sampling program can be viewed at http://www.deq.state.va.us/water/

Swimming Use
Exceedances of the fecal coliform bacteria instantaneous criterion of 1000 n/100 ml are found at station 9-PKC009.29 (near radio tower - Pulaski County). Four of 23 samples exceed the criterion. The swimming use is only partially supporting. This impairment is a 2002 addition.

Aquatic Life Use
Benthic impairment is caused by metals and habitat loss. The segment incorporates two Rapid Biological Protocol II (RBP II) stations 9-PKC009.29 (near radio tower - Pulaski County) and 9-PKC007.82 (Rt. 99 Bridge east of Pulaski). Both stations show moderate impact to the benthic community. An upstream biological and AQM station at the Commerce Street Bridge (9-PKC011.11) shows no impairment.

Exceedances of the 1995 NOAA ER-M sediment metal screening values (SV) in parts per million (ppm) are found at 9-

PKC009.29 and 9-PKC007.82. Station 9-PKC009.29 records exceedances for zinc (Zn, SV= 410 ppm, 4 of 4 samples 1280 max.) and a 2000 sediment collection at 9-PKC007.82 finds exceedances for copper (SV= 270 ppm, 1 of 1 sample 362 max.), zinc (Zn, SV= 410 ppm, 1 of 1 sample 1104 max.) and in parts per billion (ppb) chlorodane (SV= 6 ppb, 1 of 1 sample 8.90 max.). Sediment polyaromatic hydrocarbons (PAHs) also exceed their respective SVs in ppb for the following: phenanthrene (SV 1500 ppb) 3049.49, fluoranthene (SV 5100 ppb) 5866.27, pyrene (SV 2600 ppb) 3877.27 and benz(a)anthracene (SV 1600 ppb) 2047.29. The segment is fully supporting, but threatened for the aquatic life use.

Nine Rapid Biological Protocol II benthic survey results reveal no impairment to the biota at station 9-PKC011.11 (Commerce St. Bridge) even though exceedances for Lead (Pb, SV=218 ppm, 3 of 4 samples 496 max.) and zinc (Zn, SV=410 ppm, 3 of 4 samples 1520 max.) are reported. A 1999 collection also found exceedances in parts per billion (ppb) of total DDT (includes metabolites (SV= 46.1, 1 of 4 samples 130 max.). Metabolite values are DDD (SV= 20, 1 of 4 sample 30 max.), DDE (SV= 27 ppb, 1 of 4 sample 40 max.) and DDT (SV= 7 ppb, 2 of 4 samples 60 max.). However RBP II surveys report these waters are not 'Threatened'.

Fish Consumption Use
The exact source(s) of the PCB contamination is unknown.

The Virginia Department of Health (VDH) PCB action level is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment. Other information on VDH fish consumption advisories, prohibitions or bans can be viewed at http://www.vdh.state.va.us

Swimming Use
The source of the swimming impairment is urban nonpoint source pollution.

Aquatic Life Use
General Standard (Benthic) impairment sources are urban nonpoint source pollution and nonpoint source runoff from an old industrial plant site along the banks of Peak Creek.

Sediment metals exceedances are believed to be nonpoint source runoff from an old industrial plant site along the banks of Peak Creek. Upstream organic exceedances are unknown.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Montgomery

STREAM NAME: Crab Creek

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAW-N18R_CBC04A00 **TMDL MAP ID:** VAW-N18R-01

SEGMENT SIZE: 12 - Miles

INITIAL LISTING: 1996 **TMDL Schedule:** 2001 - 2004

UPSTREAM LIMIT:

DESCRIPTION: Crab Creek headwaters.

RIVER MILE: 12.00

LATITUDE: 37.11750 **LONGTITUDE:** -80.37736

DOWNSTREAM LIMIT:

DESCRIPTION: Crab Creek mouth on the New R.

RIVER MILE: 0.00

LATITUDE: 37.15361 **LONGTITUDE:** -80.52891

The upstream limit is the Crab Creek headwaters on the Ironto Quad. The downstream limit is at the Crab Creek mouth on the New River about 1.5 mi upstream of the Rt. 114 Bridge and downstream of Radford, Virginia. The segment spans the Riner, Blacksburg and Radford North Quads.

Note: Change in segment mileage (1998 vs 2002) is the result of National Hydrograph Dataset (NHD) mileages and extension of the segment upstream to include the Crab Creek headwaters.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
General Standard (Benthic)	NPS - Urban/Agriculture
	NPS - Urban/Agriculture
Total Phosphorus - 4.33 miles	PS / Urban

SUMMARY:

Swimming Use
Fecal coliform bacteria exceedances cause impairment of the swimming use. Waters in Crab Creek show continued impact as in 1998 by urban and agricultural nonpoint source pollution. The lower station, 9-CBC004.38 (at Rt. 660 Bridge below the Christiansburg STP) and an upstream station 9-CBC006.35 (at Rt. 661 above the Christiansburg STP) failed to support the swimming use. 9-CBC004.38 has 21 of 60 exceedances and 9-CBC006.35 exceeds in 21 of 59.

Aquatic Life Use
Benthic impairments cause failure to meet the aquatic life use. Biomonitoring at stations 9-CBC006.35, 9-CBC004.38 and 9-CBC001.00 show moderate impacts to the benthic community for the length of the segment.

This segment of Crab Creek is fully supporting, but threatened due to an abundance of total phosphorus exceedances. Station 9-CBC004.38 (at Rt. 660 Bridge below the former Christiansburg STP outfall) records 36 exceedances of the total phosphorus 0.20 mg/l threshold from 59 samples for the five year data window (1996 - 2000). Exceedances range from 0.30 to 2.60 mg/l. Upstream station 9-CBC006.35 (at Rt. 661 above the Christiansburg STP) finds three exceedances from 60 samples. The Christiansburg STP outfall has been moved to the New River in December 1998. Total phosphorus values have reduced since 1998. The 1999 through 2000 range of values are from less than (<) 0.10 mg/l to a maximum of 0.30. 1999 through 2000 total phosphorus data record one exceedance from 23 samples. The fully supporting, but threatened segment extends 4.33 miles from the former Christiansburg outfall (37°09'23.73" / 80°28'13.41") downstream to the Crab Creek confluence with the New River.

Swimming Use

Fecal coliform sources of impairment are a mix of agricultural and urban nonpoint source runoff. Mainly urban in the upper reaches of the watershed and a mix of urban and agriculture in the lower reaches of the watershed.

Aquatic Life Use
General Standard Benthic sources of impairment are a mix of agricultural and urban nonpoint source runoff and stream bank erosion. Mainly urban in the upper reaches of the watershed and a mix of urban and agriculture in the lower reaches of the watershed.

Total phosphorus exceedances are primarily due to the Christiansburg STP former outfall on Crab Creek.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Montgomery, Radford, City of

STREAM NAME: Connellys Run

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAW-N18R_CNL02A02 **TMDL MAP ID:**

SEGMENT SIZE: 1.57 - Miles

INITIAL LISTING: **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: Unnamed tributary 2.76 miles upstream of Connellys Run mouth.

RIVER MILE: 2.76

LATITUDE: 37.11750 **LONGTITUDE:** -80.53770

DOWNSTREAM LIMIT:

DESCRIPTION: Unnamed tributary 1.19 miles upstream of Connellys Run mouth.

RIVER MILE: 1.19

LATITUDE: 37.12306 **LONGTITUDE:** -80.55586

The segment begins at the confluence of an unnamed tributary to Connellys Run at river mile 2.76 and extends downstream to the mouth of another unnamed tributary at river mile 1.19. The entire segment is on the Radford South Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
General Standard (Benthic)	Unknown

SUMMARY:

Citizen MAIS benthic monitoring at 9CNL-2-SOS (Park Rd. 30 yds downstream from old landfill) found a high probability for adverse benthic conditions in the segment. This single survey does not provide sufficient information for use support determination. Additional monitoring is warranted to aid in making a more exact determination of the degree of support. Verification of citizen findings is needed. Multiple citizen surveys conducted downstream of 9CNL-2-SOS in Wildwood Park found no impairment.

The source of the benthic impairment is not known. The stream also appears on the 7.5 minute USGS topographical map as an intermittent stream.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Montgomery, Pulaski, Radford, City of

STREAM NAME: New River

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAW-N18R_NEW01A00 **TMDL MAP ID:**

SEGMENT SIZE: 10.85 - Miles

INITIAL LISTING: **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: Radford City intake on the New R.

RIVER MILE: 86.52

LATITUDE: 37.08167 **LONGTITUDE:** -80.57883

DOWNSTREAM LIMIT:

DESCRIPTION: Crab Cr. mouth on the New R.

RIVER MILE: 75.67

LATITUDE: 37.16139 **LONGTITUDE:** -80.55244

The segment begins at the at the Radford City intake on the New River (N18R) and extends to the Rt. 114 Bridge (N22R) downstream of the mouth of Crab Creek (Watershed Boundary). The segment spans the Radford South and Radford North Quads.

Note: Slight changes in 1998 segment mileage are due to the use of the National Hydrography Dataset (NHD).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	**IMPAIRMENT SOURCE**
Lead, Zinc	Unknown

SUMMARY:

Exceedances of the 1995 NOAA effect range- median (ER-M) sediment metal screening value (SV) are found for Zinc in parts per million (ppm) (Zn, SV=410 ppm, 3 of 5 samples, 560 max.) at station 9-NEW081.72 (VAW-N18R). Exceedances for cadmium SV (Cd, SV= 9.6 ppm, 1 of 1 sample 10 max.) and Lead (Pb, SV= 218 ppm, 1 of 1 sample 525 max.) are found at station 9-NEW077.36 and station 9-NEW075.53 finds a sediment SV exceedance for zinc (Zn, SV= 410 ppm, 1 of 1 sample 594 max.). Both stations are in watershed VAW-N22R. The waters are fully supporting, but threatened.

The exact source of the sediment metals is unknown.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Pulaski, Montgomery, Giles

STREAM NAME: New River

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAW-N35R_NEW05A00 **TMDL MAP ID:** VAW-N22R-01

SEGMENT SIZE: 52.08 - Miles

INITIAL LISTING: 2002 **TMDL Schedule:** 2010 - 2014

UPSTREAM LIMIT:

DESCRIPTION: Rt. 114 Bridge downstream of Crab Cr. mouth on the New R.

RIVER MILE: 75.67

LATITUDE: 37.16139 **LONGTITUDE:** -80.55244

DOWNSTREAM LIMIT:

DESCRIPTION: VA / WVA State Line.

RIVER MILE: 23.59

LATITUDE: 37.42861 **LONGTITUDE:** -80.85901

The segment begins at the Rt. 114 Bridge just downstream of the Crab Creek mouth (Watershed Boundary) on the New River and extends downstream to the VA / WVA State Line. The segment spans the Radford North, Eggleston, Pearisburg, Narrows and Peterstown, WVA Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
Fish Tissue - PCBs	VDH Fish Consumption Advisory / Unknown
Metals & Organics in sediment	Unknown

SUMMARY:

Fish Consumption Use
The Virginia Department of Health (VDH) has issued a fish consumption advisory (August 6, 2001) for polychlorinated biphenyls (PCBs) for this portion of the New River based on fish tissue collections from Carp. The VDH advisory recommends no consumption of carp in this segment. The VDH level of concern is 600 parts per billion (ppb) in fish tissue. Please visit http://www.deq.state.va.us for more information regarding fish tissue collections and data.

Routine 2000 fish collections in watershed VAW-N22R at 9-NEW066.90 (New River at Whitethorne) reveal PCBs in excess of the human health-risk carcinogenic screening value (SV) of 54 ppb in tissue from Carp at 686 ppb. Other species at this site record the following values: Rock Bass 14.9; Northern Hogsucker 6.56; Smallmouth Bass 7.8 ppb. Sediment collections at this site found no exceedances of the effect-range median (ER-M) sediment screening value of 180 ppb.

Routine 2000 fish tissue collections in watershed VAW-N29R at 9-NEW030.15 (Route 460 Bridge at Glen Lyn) reveal PCBs in excess of the SV of 54 ppb in tissue from Carp at 3259 ppb. Other species at this site record the following values: Rock Bass 11.7; Smallmouth Bass 7.8; Northern Hog sucker 8.45 ppb. Sediment collections at this site found no exceedances of the PCB SV.

One station 9-NEW056.22 did record PCBs in excess of the sediment SV as described below.

Aquatic Life Use
The following stations found exceedances of the effect range- median (ER-M) for metals in parts per million (ppm) and one station PCBs in parts per billion (ppb) forming two fully supporting, but threatened sediment segments.

9-NEW077.36 Downstream of Crab Cr. mouth
9-NEW075.53 Rt. 114 Bridge

9-NEW057.83 Downstream of Goodwins Ferry at the foot of Buckeye Mtn.
9-NEW056.22 Route 730 Bridge at Eggleston Gage
9-NEW033.36 Upstream of Rich Creek

The first 'Threatened' segment extends 24.35 miles from the Rt. 114 Bridge downstream to the mouth of Little Stony Creek (37°18'54.33" / 80°38'39.07"). Exceedances of the 1995 NOAA effect range- median (ER-M) sediment metal screening values (SV) are found for cadmium (Cd, SV= 9.6 ppm, 1 of 1 sample 10 max.), lead (Pb, SV= 218 ppm, 1 of 1 sample 525 max.) and zinc (Zn, SV= 410 ppm 1 of 1 sample 2410) at station 9-NEW077.36. Station 9-NEW075.53 finds a sediment exceedance for zinc (Zn, SV= 410 ppm, 1 of 1 sample 594 max.). Station 9-NEW057.83 reports a zinc sediment exceedance (Zn, SV= 410 ppm, 1 of 1 sample 466 max.). Station 9-NEW056.22 reports exceedances for zinc (Zn, SV= 410 ppm, 1 of 4 samples 480 max.) and PCBs (SV= 180 ppb, 1 of 4 samples 950 max.).

The second 'Threatened' segment extends 3.53 miles from the mouth of Wolf Creek (37°20'04.27" / 80°48'35.42") downstream to the mouth of Rich Creek (37°22'53.61" / 80°49'39.38"). Station 9-NEW033.36 finds zinc (Zn, SV= 410 ppm, 1 of 1 sample 590 max.).

Fish Consumption Use
The exact source(s) of the PCB contamination is unknown.

The Virginia Department of Health (VDH) PCB level of concern is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment. Other information on VDH fish consumption advisories, prohibitions or bans can be viewed at http://www.vdh.state.va.us

Aquatic Life Use
The exact source(s) of the sediment metals and PCB contamination is unknown.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Pulaski

STREAM NAME: Back Creek

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAW-N22R_BCK01A00 **TMDL MAP ID:** VAW-N22R-03

SEGMENT SIZE: 16.37 - Miles

INITIAL LISTING: 1996 **TMDL Schedule:** 2001 - 2004

UPSTREAM LIMIT:

DESCRIPTION: 0.70 miles below Rt. 636 crossing

RIVER MILE: 16.37

LATITUDE: 37.12583 **LONGTITUDE:** -80.77582

DOWNSTREAM LIMIT:

DESCRIPTION: Back Cr. mouth on the New R.

RIVER MILE: 0.00

LATITUDE: 37.20139 **LONGTITUDE:** -80.60289

The upstream limit is on the south edge of the White Gate Quad about 0.70 miles below the Rt. 636 crossing. The downstream end is the mouth of Back Creek on the New River just east of Parrott, Virginia. The segment spans the White Gate, Staffordsville and Radford North Quads.

Note: Adjustments to the 1998 segment mileage are due to the use of the National Hydrography Dataset (NHD).

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
General Standard (Benthic)	NPS - Agriculture/Urban
	NPS - Agriculture/Urban
Total Phosphorus	NPS - Agriculture/Urban

SUMMARY:

Swimming Use
Fecal coliform bacteria cause the segment to fail to meet the swimming goal. The segment brackets station 9-BCK009.47 (Rt. 100 Bridge) on the Staffordsville Quad. 9-BCK009.47 records 17 of 23 samples exceeding the fecal coliform bacteria instantaneous criterion of 1000 n/100 ml.

Aquatic Life Use
Rapid Biological Protocol II survey finds the biota severely impaired at 9-BCK009.47. The waters do not support the aquatic life use as a result. The 2002 General Standard (benthic) impairment is new to the segment.

The segment is fully supporting, but threatened due to two total phosphorus threshold (0.20 mg/l) exceedances from 17 samples. The maximum exceedance is 0.40 mg/l, March of 1998. The segment brackets station 9-BCK009.47 (Rt. 100 Bridge) on the Staffordsville Quad.

Note: Slight adjustments in segment mileage are due to the use of the National Hydrography Dataset (NHD).

Swimming Use
The source is believed to be a mix of agricultural and urban nonpoint source pollution.

Aquatic Life Use
The source of the General Standard (Benthic) impairment and total phosphorus exceedances are believed to be a mix of agricultural and urban nonpoint source pollution.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Montgomery

STREAM NAME: Stroubles Creek

HYDROLOGIC UNIT: 05050001

SEGMENT ID.: VAW-N22R_STE05A02 **TMDL MAP ID:**

SEGMENT SIZE: 2.05 - Miles

INITIAL LISTING: **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: In Blacksburg at Webb Street, headwaters.

RIVER MILE: 11.64

LATITUDE: 37.24833 **LONGTITUDE:** -80.41119

DOWNSTREAM LIMIT:

DESCRIPTION: Duck Pond on the VPI & SU Campus

RIVER MILE: 9.59

LATITUDE: 37.22444 **LONGTITUDE:** -80.42995

The upstream end is in Blacksburg at Webb Street, headwaters of Stroubles Creek. The downstream end is at the Duck Pond on Stroubles Creek. The entire segment is on the Blacksburg Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
General Standard (Benthic)	NPS - Urban

SUMMARY:

Citizen MAIS station 9STE-1-SOS (Webb Street in Blacksburg) finds a high probability of benthic impairment.

The General Standard (Benthic) source is believed to be urban nonpoint source runoff.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Giles

STREAM NAME: Walker Creek

HYDROLOGIC UNIT: 05050002

SEGMENT ID.: VAW-N25R_WLK01A00 **TMDL MAP ID:**

SEGMENT SIZE: 8.55 - Miles

INITIAL LISTING: **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: Cecil Br. mouth on Walker Cr.

RIVER MILE: 8.55

LATITUDE: 37.26639 **LONGTITUDE:** -80.71248

DOWNSTREAM LIMIT:

DESCRIPTION: Walker Cr. confluence on New R.

RIVER MILE: 0.00

LATITUDE: 37.31722 **LONGTITUDE:** -80.67907

The Walker Creek segment begins at the Cecil Branch confluence on Walker Creek at Rt. 100 and extends downstream to the Walker Creek mouth on the New River. The entire segment is on the Pearisburg Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	**IMPAIRMENT SOURCE**
Sediments - PCBs	Unknown

SUMMARY:

Exceedances of the 1995 NOAA effect range- median (ER-M) sediment organic screening value (SV) are found for polychlorinated biphenyls (PCBs) in parts per billion (ppb) at 9-WLK0004.34 (Route 622 Bridge). The PCB SV= 180 ppb exceeds in 1 of 4 samples with a value of 880 ppb. The waters are fully supporting, but threatened as a result.

The source(s) of the PCB contamination is unknown.

PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Giles

STREAM NAME: Stony Creek

HYDROLOGIC UNIT: 05050002

SEGMENT ID.: VAW-N28R_SNC01A00 **TMDL MAP ID:**

SEGMENT SIZE: 3.71 - Miles

INITIAL LISTING: **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: Mouth of Laurel Br. on Stony Cr.

RIVER MILE: 3.71

LATITUDE: 37.38944 **LONGTITUDE:** -80.66070

DOWNSTREAM LIMIT:

DESCRIPTION: Stony Cr. confluence with New R.

RIVER MILE: 0.00

LATITUDE: 37.35111 **LONGTITUDE:** -80.70076

The segment begins at Olean at the mouth of Laurel Branch and extends downstream to Stony Creek's confluence with the New River. The segment spans the Lindside and Pearisburg Quads.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
Fish Tissue - PCBs	Unknown

SUMMARY:

2000 routine fish collections at 9-SNC000.20 (Off Route 684 at Norcross) find polychlorinated biphenyls (PCBs) in excess of the human health-risk carcinogenic screening value (SV) of 54 ppb in tissue from a single species-Brown Trout at 318 ppb. Other species record the following values at this site: Rock Bass 25.3, Rainbow Trout 33.8 and Smallmouth Bass 13.9 ppb. No excursions of the effect range- median (ER-M) sediment screening value (SV) of 180 ppb for PCBs are reported at this site. Please visit http://www.deq.state.va.us for information on the fish tissue program.

The exact source(s) of the PCB contamination is unknown.

The Virginia Department of Health (VDH) PCB level of concern is 600 ppb in fish tissue. PCBs are a group of man-made industrial chemicals that exist as a mixture and may contain up to 209 individual compounds. Since 1977, PCBs have not been produced in the U.S., but are still found in the environment. PCBs were once widely used as coolants and lubricants in transformers, capacitors and other electrical equipment. Other information on VDH fish consumption advisories, prohibitions or bans can be viewed at http://www.vdh.state.va.us.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Giles

STREAM NAME: Adair Run

HYDROLOGIC UNIT: 05050002

SEGMENT ID.: VAW-N35R_ADR01A00 **TMDL MAP ID:**

SEGMENT SIZE: 0.38 - Miles

INITIAL LISTING: **TMDL Schedule:** -

UPSTREAM LIMIT:

DESCRIPTION: VA / WVA State Line

RIVER MILE: 0.38

LATITUDE: 37.37167 **LONGTITUDE:** -80.87255

DOWNSTREAM LIMIT:

DESCRIPTION: Adair Run confluence with the New R.

RIVER MILE: 0.00

LATITUDE: 37.37472 **LONGTITUDE:** -80.86768

The segment begins at the VA / WVA State Line and extends downstream to the Adair Run mouth on the New River. The entire segment is on the Narrows Quad.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
DDT	Unknown

SUMMARY:

Exceedances of the 1995 NOAA effect range- median (ER-M) sediment organic screening value (SV) are found for DDT in parts per billion (ppb) at 9-ADR000.13 (Rt. 648 Bridge). The DDT (SV= 7 ppb) exceeds in 1 of 4 samples with a value of 30 ppb. The waters are fully supporting, but threatened as a result.

The source(s) of the DDT contamination is unknown.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Tazewell

STREAM NAME: Bluestone River

HYDROLOGIC UNIT: 05050002

SEGMENT ID.: VAS-N36R_BST04A02 **TMDL MAP ID:** VAS-N36R-01

SEGMENT SIZE: 6.05 - Miles

INITIAL LISTING: 1996 **TMDL Schedule:** 2006 - 2004

UPSTREAM LIMIT:

DESCRIPTION: Wrights Valley Creek confluence

RIVER MILE: 27.76

LATITUDE: 37.24944 **LONGTITUDE:** -81.28750

DOWNSTREAM LIMIT:

DESCRIPTION: Watershed N37R boundary

RIVER MILE: 21.71

LATITUDE: 37.28583 **LONGTITUDE:** -81.31333

This is a portion of an 6.65 mile segment which extends from Wrights Valley Creek confluence, near the western Bluefield city limit, to the N37 watershed limit at Big Creek. Only 6.05 miles are in N36 the remainder are in N37.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
General Standard (Benthic)	NPS - Urban
	NPS - Urban
Fish Tissue - PCBs	

SUMMARY:

An ambient water quality monitoring station, 9-BST023.05, has fecal coliform violations (9 of 51). Additionally, there is a biological monitoring station, 9-BST022.27, which is assessed as moderately impaired. Fish Tissue at 9-BST021.26 was found to have PCBs.

Urban nonpoint sources, raw sewage discharges from both Bluefield STP pump station overflows and West Virginia communities are the sources of fecal coliform violations.

2002 303(d) PART 3 WATERS OF CONCERN FACT SHEET

RIVER BASIN: NEW RIVER BASIN

CITY/COUNTY: Tazewell

STREAM NAME: Laurel Fork

HYDROLOGIC UNIT: 05050002

SEGMENT ID.: VAS-N37R_LRR01A94 **TMDL MAP ID:** VAS-N37R-01

SEGMENT SIZE: 2.84 - Miles

INITIAL LISTING: 1994 **TMDL Schedule:** 2006 - 2008

UPSTREAM LIMIT:

DESCRIPTION: Route 644

RIVER MILE: 2.84

LATITUDE: 37.29972 **LONGTITUDE:** -81.35361

DOWNSTREAM LIMIT:

DESCRIPTION: Bluestone River confluence

RIVER MILE: 0.00

LATITUDE: 37.31222 **LONGTITUDE:** -81.33444

This segment extends from Pocahontas High School, on Route 644, through Pocahontas to the confluence with Bluestone River.

CLEAN WATER ACT GOAL AND USE SUPPORT:

Aquatic Life Use - Threatened

IMPAIRMENT CAUSE:	IMPAIRMENT SOURCE
Dissolved Oxygen, General Standard (Benthic)	NPS - Urban
Fecal Coliform	NPS - Urban
General Standard (Sediment-Pb, Zn, Be, Cd, Cu, Cr, Ni, Th)	Unknown

SUMMARY:

The ambient water quality monitoring station, 9-LRR002.19, has dissolved oxygen violations and fecal coliform violations at this station as well as has sediment effect range-median (ER-M) value exceedences for lead, zinc, beryllium, cadmium, chromium, copper, nickel, and thallium. . A biological monitoring station, 9-LRR001.39, indicates the segment is severely impaired.

The source for the fecal coliform violations in this segment are urban nonpoint and overflows from the municipal collection system. Pocahontas STP has a history of operational problems and violations of their discharge limits. Resource extraction has been a major land use in the watershed for nearly a century. The biological habitat within this section is severely stressed due to both urban land uses and probably resource extraction. Channel modifications and lack of riparian zone buffers are some of the results of urban encroachment.